Table 1. Sequence of LoxP Sites

5'-ATAACTTCGTATAATGTATGCTATACGAAGTTAT-3' LoxP WT [SEQ ID NO: 1] **LoxP511** 5'-ATAACTTCGTATAGTATACATTATACGAAGTTAT-3' [SEQ ID NO: 2] LoxC2 5'-ACAACTTCGTATAATGTATGCTATACGAAGTTAT-3' [SEQ ID NO: 3] 5'-ATAACTTCGTATAATATATGCTATACGAAGTTAT-3' [SEQ ID NO: 4] LoxP2 5'-ATAACTTCGTATAGCATACATTATACGAAGTTAT-3' [SEQ ID NO: 5] 5'-ATAACTTCGTATAATGTATACTATACGAAGTTAT-3' LoxP3 [SEQ ID NO: 6] LoxP4 5'-ATAACTTCGTATAATATAAACTATACGAAGTTAT-3' [SEQ ID NO: 7] LoxP5 5'-ATAACTTCGTATAATCTAACCTATACGAAGTTAT-3' [SEQ ID NO: 8] LoxP6 5'-ATAACTTCGTATAACATAGCCTATACGAAGTTAT-3' [SEQ ID NO: 9] LoxP7 5'-ATAACTTCGTATAACATACCCTATACGAAGTTAT-3' [SEQ ID NO: 10] LoxP8 5'-ATTACCTCGTATAGCATACATTATACGAAGTTAT-3' [SEQ ID NO: 11] LoxP9 5'-ATAACTTCGTATAGCATACATTATATGAAGTTAT-3' [SEQ ID NO: 12] **LoxP10** 5'-ATTACCTCGTATAGCATACATTATATGAAGTTAT-3' [SEQ ID NO: 13]

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Table 2. Sequence of PCR primers for amplifying heavyand light-chain genes of human antibody.

(B= C/G/T; D= A/G/T; K= G/T; M= A/C; R= A/G; S= C/G; W= A/T; and Y= C/T)

a) Heavy-chain VH

5'-primers (back primers):

VH1b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTG CAG GAG TCS G-3' [SEQ ID NO: 14]

VH2b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTA CAG CTG CAG CAG TCA-3' [SEQ ID NO: 15]

VH3b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTA CAG CAG TGG G-3' [SEQ ID NO: 16]

VH4b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC GAG GTG CAG CTG KTG GAG WCY-3' [SEQ ID NO: 17]

VH5b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTC CAG CTK GTR CAG TCT GG-3' [SEQ ID NO: 18]

VH6b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG RTC ACC TTG AAG GAG TCT G-3' [SEQ ID NO: 19]

VH7b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTG GTG SAR TCT GG-3' [SEQ ID NO: 20]

3'-primers (forward primers):

VH1f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC TGA GAC RGT GAC CAG GGT G-3' [SEQ ID NO: 21]

VH2f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC TGA GAC GGT GAC CAG GGT T-3' [SEQ ID NO: 22]

VH3f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC TGA AGA GAC GGT GAC CAT TGT-3' [SEQ ID NO: 23]

VH4f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC TGA GAC GGT GAC CGT GGT CC-3' [SEQ ID NO: 24]

VH5f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC GGT TGG GGC GGA TGC ACT CC-3' [SEQ ID NO: 25]

VH6f: 5'-ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC SGA TGG GCC CTT GGT GGA RGC-3' [SEQ ID NO: 26]

b) Light-chain $V\lambda$

5'-primers (back primers):

Vλ1b: 5'-GGC GGT GGT GGA TCA GGC GGA GGA TCT GGC GGA
GGT GGC AGC GGT GGA GGC AGT CAG TCT GTS BTG ACG CAG
CCG CC-3' [SEQ ID NO: 27]

Vλ2b: 5'-GGC GGT GGT GGA TCA GGC GGC GGA GGA TCT GGC GGA GGT GGC AGC GGT GGA GGC AGT TCC TAT GWG CTG ACW CAG CCA C-3' [SEQ ID NO: 28]

Vλ3b: 5'-GGC GGT GGT GGA TCA GGC GGA GGA TCT GGC GGA GGT GGC AGC GGT GGA GGC AGT TCC TAT GAG CTG AYR CAG CYA CC-3' [SEQ ID NO: 29]

Vλ4b: 5'-GGC GGT GGT GGA TCA GGC GGC GGA GGA TCT GGC GGA GGT GGC AGC GGT GGA GGC AGT CAG CCT GTG CTG ACT CAR YC-3' [SEQ ID NO: 30]



Vλ6b: 5'-GGC GGT GGT GGA TCA GGC GGC GGA GGA TCT GGC GGA GGT GGC AGC GGC AGC CCW GKG CTG ACT CAG CCM CC-3' [SEQ ID NO: 32]

3'-primers (forward primers):

Vλ1f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC TAG GAC GGT SAS CTT GGT CC-3' [SEQ ID NO: 36]

Vλ2f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC GAG GAC GGT CAG CTG GGT GC-3' [SEQ ID NO: 37]

c) Light-chain VK

5'-primers (back primers):

VK4b: 5'-GGC GGT GGT GGA TCA GGC GGC GGA GGA TCT GGC GGA GGT GGC AGC AGC ACC ACC ACC CAG TCT C-3' [SEQ ID NO: 41]

3'-primers (forward primers):

Vk1f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC TTT GAT TTC CAC CTT GGT CC-3' [SEQ ID NO: 42]

Vk2f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC TTT GAT CTC CAS CTT GGT CC-3' [SEQ ID NO: 43]

VK3f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC TTT GAT ATC CAC TTT GGT CC-3' [SEQ ID NO: 44]

VK4f: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TTC TTT AAT CTC CAG TCG TGT CC-3' [SEQ ID NO: 45]

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Table 3. Sequence of oligonucleotides for modifying the cloning vector pACT2.

a) The sense strand

5'-TCGA GGC GGT GGT GGA TCA GGC GGC GGA GGA TCT GGC GGA GGT GGC AGC GGT GGT GGA GGC AGT GCG CGC TTA ATT AA-3' [SEQ ID NO: 46]

b) The antisense strand

5'-TCG ATT AAT TAA GCG CGC ACT GCC TCC ACC ACC GCT GCC ACC TCC GCC AGA TCC TCC GCC GCC TGA TCC ACC ACC GCC-3' [SEQ ID NO: 47]

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Table 4. Sequence of PCR primers that include loxP sites for amplifying heavy- and light-chain genes of human antibody.

(B= C/G/T; D= A/G/T; K= G/T; M= A/C; R= A/G; S= C/G; W= A/T; and Y= C/T)

a) Heavy-chain VH

5'-primers (back primers):

VH1b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTG CAG GAG TCS G-3' [SEQ ID NO: 14]

VH2b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTA CAG CTG CAG CAG TCA-3' [SEQ ID NO: 15]

VH3b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTA CAG CAG TGG G-3' [SEQ ID NO: 16]

VH4b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC GAG GTG CAG CTG KTG GAG WCY-3' [SEQ ID NO: 17]

VH5b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTC CAG CTK GTR CAG TCT GG-3' [SEQ ID NO: 18]

VH6b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG RTC ACC TTG AAG GAG TCT G-3' [SEQ ID NO: 19]

VH7b: 5'-ACC CCA CCA AAC CCA AAA AAA GAG ATC TGT ATG GCT TAC CCA TAC GAT GTT CCA GAT TAC CAG GTG CAG CTG GTG SAR TCT GG-3' [SEQ ID NO: 20]

3'-primers (forward primers):

VH1'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC TGA GGA GAC RGT GAC CAG GGT G-3' [SEQ ID NO: 48]

- VH2'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC TGA GGA GAC GGT GAC CAG GGT T-3' [SEQ ID NO: 49]
- VH3'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC TGA AGA GAC GGT GAC CAT TGT-3' [SEQ ID NO: 50]
- VH4'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC TGA GGA GAC GGT GAC CGT GGT CC-3' [SEQ ID NO: 51]
- VH5'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC GGT TGG GGC GGA TGC ACT CC-3' [SEQ ID NO: 52]
- VH6'f: 5'-ACT GCC TCC ACC TGA TAA CTT CGT ATA GCA TAT ATT ATA CGA AGT TAT TGA TCC ACC ACC GCC SGA TGG GCC CTT GGT GGA RGC-3' [SEQ ID NO: 53]

b) Light-chain $V\lambda$

5'-primers (back primers):

Vλ1'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT CAG TCT GTS BTG ACG
CAG CCG CC-3' [SEQ ID NO: 54]

Vλ2'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC

TAT ACG AAG TTA TCA GGT GGA GGC AGT TCC TAT GWG CTG ACW

CAG CCA C-3' [SEQ ID NO: 55]

Vλ3'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC

TAT ACG AAG TTA TCA GGT GGA GGC AGT TCC TAT GAG CTG AYR

CAG CYA CC-3' [SEQ ID NO: 56]

Vλ4'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC

TAT ACG AAG TTA TCA GGT GGA GGC AGT CAG CCT GTG CTG ACT

CAR YC-3' [SEQ ID NO: 57]

Vλ5'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC TAT ACG AAG TTA TCA GGT GGA GGC AGT CAG DCT GTG GTG ACY CAG GAG CC-3' [SEQ ID NO: 58]

Vλ6'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC

TAT ACG AAG TTA TCA GGT GGA GGC AGT CAG CCW GKG CTG ACT

CAG CCM CC-3' [SEQ ID NO: 59]

Vλ7'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT TCC TCT GAG CTG AST
CAG GAS CC-3' [SEQ ID NO: 60]

Vλ8'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC

TAT ACG AAG TTA TCA GGT GGA GGC AGT CAG TCT GYY CTG AYT

CAG CCT-3' [SEQ ID NO: 61]

VA9'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT AAT TTT ATG CTG ACT
CAG CCC C-3' [SEQ ID NO: 62]

3'-primers (forward primers):

Vλ1'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT TAG GAC GGT SAS CTT GGT CC-3' [SEQ ID NO: 63]

Vλ2'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT GAG GAC GGT CAG CTG GGT GC-3' [SEQ ID NO: 64]

c) Light-chain VK

5'-primers (back primers):

VK1'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT GAC ATC CRG DTG ACC
CAG TCT CC-3' [SEQ ID NO: 65]

VK2'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT GAA ATT GTR WTG ACR
CAG TCT CC-3' [SEQ ID NO: 66]

VK3'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT GAT ATT GTG MTG ACB
CAG WCT CC-3' [SEQ ID NO: 67]

VK4'b: 5'-GGC GGT GGT GGA TCA ATA ACT TCG TAT AAT ATA TGC
TAT ACG AAG TTA TCA GGT GGA GGC AGT GAA ACG ACA CTC ACG
CAG TCT C-3' [SEQ ID NO: 68]

3'-primers (forward primers):

Vk1'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT TTT GAT TTC CAC CTT GGT CC-3' [SEQ ID NO: 69]

Vk2'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT TTT GAT CTC CAS CTT GGT CC-3' [SEQ ID NO: 70]

VK3'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT TTT GAT ATC CAC TTT GGT CC-3' [SEQ ID NO: 71]

VK4'f: 5'-CTT CGT ATA ATG TAT GCT ATA CGA AGT TAT TTT AAT CTC CAG TCG TGT CC-3' [SEQ ID NO: 72]

3'-primers (forward primers) for 2^{nd} PCR of $V\lambda$ and $V\kappa$:

Vλ/Vκf: 5'-GAG ATG GTG CAC GAT GCA CAG TTG AAG TGA ACT TGC GGG GTT TTT CAG TAT CTA CGA TAA CTT CGT ATA ATG TAT GCT-3' [SEQ ID NO: 73]

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| | <213> Artificial Sequence | |
| | <220> | |
| | <pre><223> Description of Artificial Sequence: PCR primer</pre> | |
| | <400> 26 | |
| | actgcctcca ccaccgctgc cacctccgcc agatectccg ccgcctgatc caccaccgcc | 60 |
| | sgatgggccc ttggtggarg c | 81 |
| | <210> 27 | |
| | <211> 83 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | <220> | |
| | <223> Description of Artificial Sequence: PCR primer | |
| | <400> 27 | |
| | ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| | cagtctgtsb tgacgcagcc gcc | 83 |
| | <210> 28 | |
| | <211> 82 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | <220> | |
| | <223> Description of Artificial Sequence: PCR primer | |
| | <400> 28 | |
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| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt tcctatgwgc tgacwcagcc ac | 60 82 |
|---|----------|
| <210> 29 <211> 83 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | • |
| <400> 29 | |
| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt tcctatgagc tgayrcagcy acc | 60 83 |
| <210> 30 | |
| <211> 80 | |
| <212> DNA | |
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| <220> | |
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| <400> 30 | |
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| cagcctgtgc tgactcaryc | 80 |
| <210> 31 | |
| <211> 83 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 31 | |
| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| cagdctgtgg tgacycagga gcc | 83 |
| <210> 32 | |
| <211> 83 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 32 | |



| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt cagccwgkgc tgactcagcc mcc | 60 83 |
|---|----------|
| <210> 33 | |
| <211> 83 | |
| <212> DNA | |
| <213> Artificial Sequence | |
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| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
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| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| teetetgage tgasteagga see | 83 |
| | |
| <210> 34 | |
| <211> 81 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <pre><223> Description of Artificial Sequence: PCR primer</pre> | |
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| <400> 34 | |
| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| cagtctgyyc tgaytcagcc t | 81 |
| | |
| <210> 35 | |
| <211> 82 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <pre><223> Description of Artificial Sequence: PCR primer</pre> | |
| 12232 Description of Artificial Sequence. For primer | |
| <400> 35 | |
| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| aattttatgc tgactcagcc cc | 82 |
| | |
| <210> 36 | |
| <211> 80 | |
| <212> DNA | |
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| | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 36 | |
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| gagatggtgc acgatgcaca taggacggts ascttggtcc | gttgaagtga | acttgcgggg | tttttcagta | tctacgattc | 60 80 |
|--|-------------|--------------|------------|------------|----------|
| <210> 37 | | | | | |
| <211> 80 | | | | | |
| <212> DNA | | | | | |
| <213> Artificial Seque | ence | | | | |
| varor interretar beque | | | | | |
| <220> | | | | | |
| <223> Description of A | rtificial S | Sequence: PO | CR primer | | |
| <400> 37 | | | | • | |
| gagatggtgc acgatgcaca | gttgaagtga | acttqcqqqq | tttttcagta | tctacgattc | 60 |
| gaggacggtc agctgggtgc | | 3 3333 | | , | 80 |
| <210> 38 | | | | | |
| <211> 83 | | | | | |
| <212> DNA | | | | | |
| <213> Artificial Seque | nce · | | | | |
| | | | | | |
| <220> | | | | | |
| <223> Description of A | rtificial S | Sequence: PC | CR primer | | |
| <400> 38 | | | | | |
| ggcggtggtg gatcaggcgg | cggaggatct | ggcggaggtg | gcagcggtgg | tqqaqqcaqt | 60 |
| gacateergd tgacccagte | | | | | 83 |
| <210> 39 | | | | • | |
| <211> 83 | | | | | |
| <212> DNA | | | | | |
| <213> Artificial Seque | nce | | | | |
| | | | | | |
| <220> | | | | | |
| <223> Description of A | rtificial S | equence: PC | CR primer | | |
| <400> 39 | | | | | |
| ggcggtggtg gatcaggcgg | cggaggatct | ggcggaggtg | gcagcggtgg | tggaggcagt | 60 |
| gaaattgtrw tgacrcagtc | tcc | | | | 83 |
| <210> 40 | | | | | |
| <211> 83 | | | | | |
| <212> DNA | | | | | |
| <213> Artificial Seque | nce | | | | |
| | | | | | |
| <220> | | | | | |
| <223> Description of A | rtificial S | equence: PC | CR primer | | |
| <400> 40 | | | | | |



| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt gatattgtgm tgacbcagwc tcc | 60 83 |
|---|----------|
| <210> 41 | |
| <211> 82 | |
| <212> DNA | |
| | |
| <213> Artificial Sequence | |
| <220> | |
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| <400> 41 | |
| ggcggtggtg gatcaggcgg cggaggatct ggcggaggtg gcagcggtgg tggaggcagt | 60 |
| gaaacgacac tcacgcagtc tc | 82 |
| <210> 42 | |
| <211> 80 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| \213\times Altificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 42 | |
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| tttgatttcc accttggtcc | 80 |
| <210> 43 | |
| <211> 80 | |
| <212> DNA | |
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| <213> Artificial Sequence | |
| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 43 | |
| gagatggtgc acgatgcaca gttgaagtga acttgcgggg tttttcagta tctacgattc | 60 |
| tttgatctcc ascttggtcc | 80 |
| | |
| <210> 44 | |
| <211> 80 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
| <pre><223> Description of Artificial Sequence: PCR primer</pre> | |
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| <400> 44 | |

| gagatggtgc acgatgcaca gttgaagtga acttgcgggg tttttcagta tttgatatcc actttggtcc | tctacgattc | 60 80 |
|--|------------|----------|
| <210> 45 <211> 80 <212> DNA | | |
| <213> Artificial Sequence | | |
| <220> <223> Description of Artificial Sequence: PCR primer | | |
| <400> 45 | | |
| gagatggtgc acgatgcaca gttgaagtga acttgcgggg tttttcagta tttaatctcc agtcgtgtcc | tctacgattc | 60 80 |
| <210> 46 | | |
| <211> 78 <212> DNA | | |
| <213> Artificial Sequence | | |
| <220> | | |
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| <400> 46 | | |
| tcgaggcggt ggtggatcag gcggcggagg atctggcgga ggtggcagcg cagtgcgcgc ttaattaa | gtggtggagg | 60 78 |
| <210> 47 | | |
| <211> 78 | | |
| <212> DNA <213> Artificial Sequence | | |
| <220> | | |
| <223> Description of Artificial Sequence: PCR primer | | |
| <400> 47 | | |
| togattaatt aagogogoac tgootocacc accgotgooa cotcogocag | atcctccgcc | 60 |
| gectgateca ceaeegee | | 78 |
| <210> 48 | | |
| <211> 85 | | |
| <212> DNA <213> Artificial Sequence | | |
| allo, interretar ocquence | | |
| <220> | | |
| <223> Description of Artificial Sequence: PCR primer | | |
| <400> 48 | | |

| actgcctcca cctgataact tcgtatagca tatattatac gaagttattg atccaccacc gcctgaggag acrgtgacca gggtg | 60 85 |
|--|----------|
| <210> 49 <211> 85 <212> DNA | |
| <213> Artificial Sequence | |
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| <400> 49 actgcctcca cctgataact tcgtatagca tatattatac gaagttattg atccaccacc gcctgaggag acggtgacca gggtt | 60 85 |
| <210> 50 <211> 84 | |
| <212> DNA | |
| <213> Artificial Sequence | |
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| gcctgaagag acggtgacca ttgt | 84 |
| <210> 51 | |
| <211> 86 | |
| <212> DNA <213> Artificial Sequence | |
| V213/ ATCITICIAL Sequence | |
| <220> | |
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| actgcctcca cctgataact tcgtatagca tatattatac gaagttattg atccaccacc gcctgaggag acggtgaccg tggtcc | 60 86 |
| <210> 52 | |
| <211> 83 | |
| <212> DNA <213> Artificial Sequence | |
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| <220> | |
| <223> Description of Artificial Sequence: PCR primer | |
| <400> 52 | |



| actgcctcca cctgataact tcgtatagca tatattatac gaagttatt | g atccaccacc | 60 |
|--|--------------|----|
| gccggttggg gcggatgcac tcc | | 83 |
| <210> 53 | | |
| <211> 84 | | |
| <211> 04 <212> DNA | | |
| <213> Artificial Sequence | | |
| 1213/ Altificial Dequence | | |
| <220> | | |
| <223> Description of Artificial Sequence: PCR primer | | |
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| <400> 53 | | |
| actgcctcca cctgataact tcgtatagca tatattatac gaagttatt | g atccaccacc | 60 |
| gccsgatggg cccttggtgg argc | | 84 |
| | | |
| <210> 54 <211> 86 | | |
| <211> 00 <212> DNA | | |
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| 1213/ Altilicial Sequence | | |
| <220> | | |
| <223> Description of Artificial Sequence: PCR primer | | |
| 1 | | |
| <400> 54 | | |
| ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttat | c aggtggaggc | 60 |
| agtcagtctg tsbtgacgca gccgcc | | 86 |
| | | |
| <210> 55 | | |
| <211> 85 | | |
| <212> DNA | | |
| <213> Artificial Sequence | | |
| <220> | | |
| <223> Description of Artificial Sequence: PCR primer | | |
| The second secon | ÷ | |
| <400> 55 | | |
| ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttat | c aggtggaggc | 60 |
| agttcctatg wgctgacwca gccac | | 85 |
| | | |
| <210> 56 | | |
| <211> 86 | | |
| <212> DNA | | |
| <213> Artificial Sequence | | |
| <220> | | |
| <pre><220> <223> Description of Artificial Sequence: PCR primer</pre> | | |
| abor becompeted of mentional bequeince. For primer | | |
| <400> 56 | | |



| ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc agttcctatg agctgayrca gcyacc | 60 86 |
|---|----------|
| <210> 57 <211> 83 <212> DNA <213> Artificial Sequence | |
| <220> <223> Description of Artificial Sequence: PCR primer | |
| <400> 57 ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc agtcagcctg tgctgactca ryc | 60 83 |
| <210> 58 <211> 86 <212> DNA <213> Artificial Sequence | |
| <220> <223> Description of Artificial Sequence: PCR primer | |
| <400> 58 ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc agtcagdctg tggtgacyca ggagcc | 60 86 |
| <210> 59 <211> 86 <212> DNA <213> Artificial Sequence | |
| <220> <223> Description of Artificial Sequence: PCR primer | |
| <400> 59 ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc agtcagccwg kgctgactca gccmcc | 60 86 |
| <210> 60 <211> 86 <212> DNA <213> Artificial Sequence | |
| <220> <223> Description of Artificial Sequence: PCR primer · | |
| <400> 60 | |

| ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagt agttcctctg agctgastca ggascc | tatc aggtggaggc 60 86 |
|--|--------------------------|
| <210> 61 | |
| <211> 84 | |
| <212> DNA | |
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| <220> | |
| <223> Description of Artificial Sequence: PCR prim | er |
| <400> 61 | |
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| agtcagtctg yyctgaytca gcct | 84 |
| | |
| <210> 62 | |
| <211> 85 | |
| <212> DNA | |
| <213> Artificial Sequence | |
| <220> | |
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| agtaatttta tgctgactca gcccc | 85 |
| <210> 63 | |
| <211> 50 | |
| <212> DNA | |
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| <220> | |
| <pre><220> <223> Description of Artificial Sequence: PCR prim</pre> | <u>-</u> r |
| in the state of th | |
| <400> 63 | • |
| cttcgtataa tgtatgctat acgaagttat taggacggts ascttg | gtcc 50 |
| <210> 64 | |
| <211> 50 | |
| <211> 30 <212> DNA | |
| <213> Artificial Sequence | |
| * | |
| <220> | |
| <223> Description of Artificial Sequence: PCR prim | er |
| <100> C1 | |
| <400> 64 | |
| cttcgtataa tgtatgctat acgaagttat gaggacggtc agctgg | gtgc 50 |



| | <210> 65 | |
|----|--|----------|
| | <211> 86 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | <220> | |
| | <223> Description of Artificial Sequence: PCR primer | |
| | <400> 65 | |
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| | <210> 66 | |
| | <211> 86 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | <220> | |
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| | <400> 66 | |
| | ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc | 60 |
| | agtgaaattg trwtgacrca gtctcc | 86 |
| | <210> 67 | |
| | <211> 86 | |
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| | <220> | |
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| | ggcggtggtg gatcaataac ttcgtataat atatgctata cgaagttatc aggtggaggc | 60 |
| | agtgatattg tgmtgacbca gwctcc | 86 |
| | <210> 68 | |
| | <211> 85 | |
| | <212> DNA | |
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| | <220> | |
| | <223> Description of Artificial Sequence: PCR primer | |
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| | agtgaaacga cactcacgca gtctc | 0 5 |

| | <210> 69 | |
|-----------------------------------|--|----|
| | <211> 50 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | | |
| | <220> | |
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| | cttcgtataa tgtatgctat acgaagttat tttgatttcc accttggtcc | 50 |
| | <210> 70 | |
| | <211> 50 | |
| | <212> DNA | |
| | <213> Artificial Sequence | • |
| | <220> | |
| | | |
| ŧ | <223> Description of Artificial Sequence: PCR primer | |
| · willy | <400> 70 | |
| T | cttcgtataa tgtatgctat acgaagttat tttgatctcc ascttggtcc | 50 |
| Sent und som Spate und Spate find | <210> 71 | |
| 1 | <211> 50 | |
| 1 | <212> DNA | |
| 2 | <213> Artificial Sequence | |
| · | • | |
| r T | <220> | |
| 1 | <223> Description of Artificial Sequence: PCR primer | |
| 1 | | |
| 1 | <400> 71 | |
| r dina | cttcgtataa tgtatgctat acgaagttat tttgatatcc actttggtcc | 50 |
| | <210> 72 | |
| | <211> 50 | |
| | <212> DNA | |
| | <213> Artificial Sequence | |
| | <220> | |
| | <223> Description of Artificial Sequence: PCR primer | |
| | des sectificion of medical bequence. Tex primer | |
| | <400> 72 | |
| | cttcgtataa tgtatgctat acgaagttat tttaatctcc agtcgtgtcc | 50 |
| | <210> 73 | |
| | <211> 78 | |
| | <212> DNA | |

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<220>
<223> Description of Artificial Sequence: PCR primer.
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cttcgtataa tgtatgct
`<210> 74
<211> 63
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Suc 2 signal
<400> 74
atgcttttgc aagctttcct tttccttttg gctggttttg cagccaaaat atctgcatca 60
atg
                                                                   63
<210> 75
<211> 20
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Linker peptide
<400> 75
Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly
Gly Gly Gly Ser
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